Section 2 Installation

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1. WHAT IS DELIVERED

Ultra 5 / 10 / 60	Internal hard drive	
	Memory	
	Onboard PGX framebuffer	
	Color (17" / 21") / greyscale (21")monitors	
	Keyboard + mouse	
	Cdrom reader	
	Floppy drive	
Optional	Memory Extension	
	HardCopy Unit Card	
	Ethernet card (Quad / Single)	
	PGX card (Pseudo color)	
	Md2 (Grey scale)	
	Creator card (True color) Ultra 10/60 only	
	Twin SCSI Card	
Peripherals	Image disks	PTI 2
	EasyStore (Optical Disk)	PTI 2
	EasyStore (CD-Rec)	PTI 1

IMPORTANT !!!

The main part of this section describes the hardware installation per system. This can be a standalone EasyVision, a Server or a Workspot! Look at the commercial order what is appropriate for your environment.

For of a client/server environment installation, see chapter 6.1.7 Client / server.

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2. PERSONEL

The total installation can be done by just one person.

3. INSTALLATION TIME

3.1. EASYVISION IN STAND-ALONE SYSTEM

Stand-alone: 8 hours

The total installation of a stand-alone EasyVision can be done within eight hours. Even the installation of a small network (e.g. 3 systems close to each other) can be completed within 8 hours.

3.2. CLIENT / SERVER EASYVISION

Server: 8 hours
Client: 4 hours

4. TRANSPORT LOCKINGS

There are **NO** transport lockings for disk-, DOR- and CD-ROM drive(s).

5. PHYSICAL INSTALLATION

The software has been installed at the factory. The software installation keeps track of the SCSI chain configuration. For this reason it is very important to build the same hardware configuration as assembled in the factory. The SCSI chains on the SUN and corresponding peripheral cabinets are labeled with stickers (SCSI-A, SCSI-B or SCSI-C).

You must connect the factory defined SCSI chain!!!

WARNING

If the SCSI chain changes for any reason (e.g. an option) the OS and AS software must be reinstalled!

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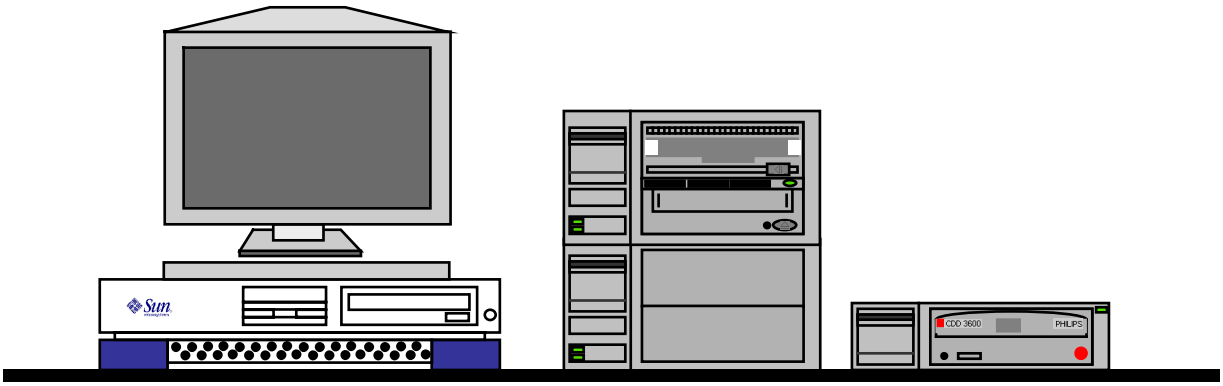
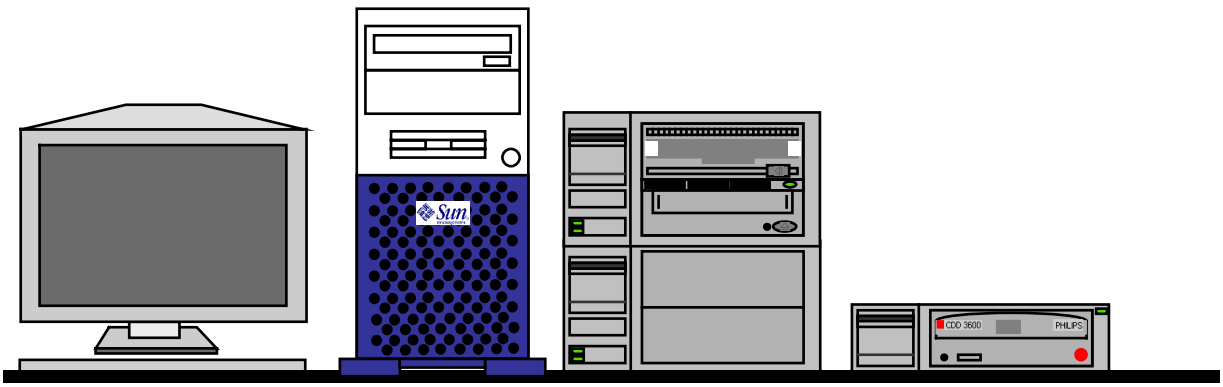
5.1. DESKTOP VERSION

- In a desktop configuration all separate components of the system should be placed on the hospital table
- Place Sun UltraSPARC on top of the hospital table.
- Place Peripheral-2 Cabinet(s) next Sun UltraSPARC.
- Place Monitor(s) on top of Sun UltraSPARC.
- Place the Peripheral-1 cabinet, if present, next to or on top of the Peripheral-2 Cabinet.
- Place Sun Keyboard within reach on the table.
- Place Mouse + Mouse pad within reach on the table.
- Place Dials unit within reach on the table.
- Place Dials power supply behind the Sun UltraSPARC.
- Place modem behind the Sun UltraSPARC.
- Place the mains distribution unit within reach on the table. The mains distribution unit contains the system power on/off switch.

Example Ultra 5:



Example Ultra 10 / 60:



NOTE

You are free to choose another position, but keep track of the SCSI cable lengths (see chapter 7.1 SCSI-chain configurations*)*

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6. CABLING

See Z drawings of appropriate SUN UltraSPARC;
See also the connection diagram PCR system AC500/AC5000

NOTE

Check all external and internal interface cables (e.g., the SCSI cable to the image hard disc, CD-ROM, DOR), as they may have moved during transport.

6.1. JOINING CABLES & CONNECTORS

6.1.1. MONITOR CABLES

Connect the video cable from the monitor to the Sun UltraSPARC video connector.

Connect the monitor power cable to the power distribution unit.

6.1.2. KEYBOARD & MOUSE CABLING

Connect the Sun keyboard cable to the SUN keyboard connector.
Connect the mouse cable to the keyboard. The left and right hand connectors of the Sun Keyboard are identical.

6.1.3. NETWORK CONNECTION

A network kit or cable (for thicknet or Twisted Pair, 5m long) is only delivered with EasyVision when ordered, or during pre-installation phase otherwise you should obtain this locally.

You can connect EasyVision to the network in two ways:
- via an AUI connection (thick ethernet);
- via a twisted pair (TP) connection.

Twisted Pair Connection
Connect a twisted pair cable between the twisted pair connector on the SUN SPARCstation and a twisted pair hub or wall connection.

For further information about Ethernet refer to the Service Manual EasyNetWorking.

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6.1.4. NETWORK IP- READERS (FUJI AC500/AC5000)

Connect the readers Network port 'CPU 90F-LAN' at the rear side of the reader with a STP cable (RJ45) to a port of a local hub or to a wall connector if the PCR system will be integrated into a hospital network. Ask the network administrator for a proper wall outlet to connect with.

6.1.5. IP- READERS WITH PARALLEL INTERFACE (DMS) (AC3/AC3000/PCR9000)

Connect the Reader interface cable (DMS) to the PCI reader interface connector at the EasyVision RAD (Sun Ultra X computer) and the DMS interface connector at the reader.
If the EasyVision RAD has been upgraded with a PCI Reader Interface board boot the EasyVision with the boot command:

boot –R

and start the application. The EasyVision RAD doesn't have to be configured manually. The system detects at startup time the PCI Reader Interface board loads the interface driver and starts the reader server.

6.1.6. USIT (USER TERMINAL)

- Connect the network ports of all USIT PCs (server/client) to ports of a local network hub or to wall connectors if the PCR system will be integrated into a hospital network.
- Connect the serial IDT cable to the serial port 1 of the USIT server PC (male) and to the IDT connector (female) of the IP Reader.

Refer to the respective service manuals of the readers and user terminal for proper connecting these devices.
For configuring these devices refer to the respective Release Bulletins.

NOTE:

If in an installation other network standards than Twisted Pair are going to be used (i.e. Thinnet=10Base2, with 50 Ohm coax cable) refer to the manual EasyNetworking (Order No. 4522 983 66772) which is part of the PCR system documentation. Find in tis manual the rules to be kept for proper network design and installation in a hospital environment.

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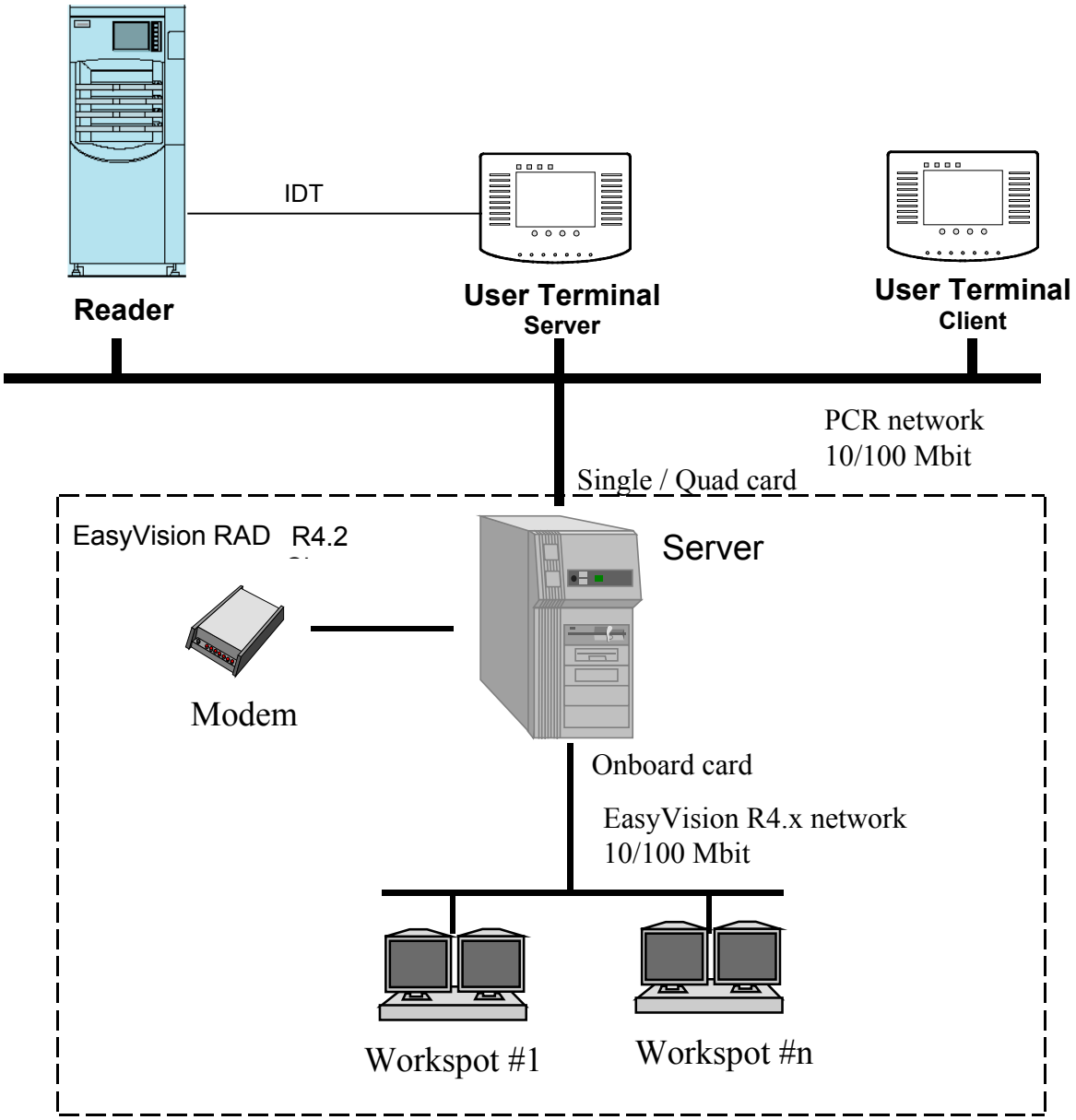
6.1.7. CLIENT / SERVER NETWORK CONNECTION

See Z drawings for cable diagrams.

Example:



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6.1.8. ETHERNET LOOPBACK CONNECTOR

The loopback connectors serves two purposes.

- If a network is not connected to EasyVision, connect the loopback connector to the Ethernet connection at the end of the adaptor cable. This suppresses the UNIX message 'no carrier' (to console).
- Diagnostic purpose in Forth Diagnostics, see UltraSPARC Unit Manual.

NOTE

In case of a Single/Quad Ethernet card: The unused controllers must have an Ethernet loopback connector connected

---

6.1.9. LASER HARDCOPY UNIT INTERFACE CABLES

The Laser HardCopy Unit (HCU) is connected to the EasyVision HCU split cable by a DATA and CONTROL cable (SUB-D 37p connectors). Connect the Data and Control cables.

NOTE

*Ensure that the correct connections have been made for the DATA and CONTROL cables. Interchanging these cables may **destroy** the S-bus hard copy interface.*

Refer to the chapter "Connecting a Printer" in this Section 2.

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6.1.10. MAINS CABLES

Fit the correct mains plug to the mains cable of the power distribution unit provided. A couple of mains plugs are delivered with the system but if the correct one for your environment is not there, you will have to obtain one locally. The EV DeskTop is delivered with separate Mains Distribution Unit as shown below. The EV Trollry and Combi Trolley have the Mains Distribution Unit built.

- Connect the mains cable between the SUN and the power distribution unit.
- Connect the mains cable between the peripheral cabinet and the power distribution unit.
- Connect the mains cable between the Monitor and the power distribution unit.
- Connect the mains adapter for the dials unit to the power distribution unit.
- Connect the mains cable to a mains wall socket. Ensure that a proper earth connection has been made between the system and the wall socket !
- The Laser HardCopy Unit (HCU) power cable may now be connected to the mains supply (if relevant).

- **NOTE**
  Make sure that the HCU has been connected to the same mains distribution point as the EasyVision. This is important to protect both the HCU interface of the EasyVision RAD and the the interface in the HCU from voltage differences dangerous for the electronic interface components.

6.1.11. MODEM

Loopback Connector:

Normally, a serial port loopback connector is connected to serial port B (rear of SS-5/ Ultra 1 /2).
If you want to connect your service PC to port B:
1. Boot the system.
2. Remove the loopback connector.
3. Connect your PC.

Modem:

Install the modem on serial port B with the delivered modem cable. In case of a modem the serial port B loopback connector must be left out.

110V Wall socket
220V Distribution box (furniture/desktop)

NOTE

In case of an Ultra 5 / 10 the serial port connector is a 9p socket

6.2. CABLE RELIEF

Relieve the power cable, transceiver cable and hardcopy cables with tie-raps or flexible cable wrapper delivered.

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7. PERIPHERAL CABINETS

CAUTION

The last PTI cabinet in each SCSI Chain must be terminated with a loopback connector.

CAUTION

If the SCSI chain configuration has been changed, the OS and As must be installed

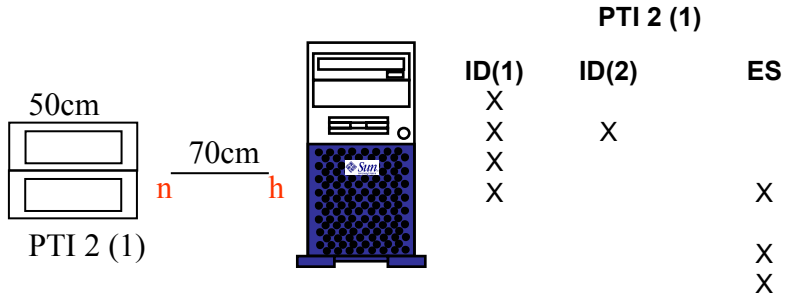
---

7.1. SCSI-CHAIN CONFIGURATIONS

Abbreviation	Device	SCSI
ID(1)	Image Disk	Wide SCSI (68 pin)
ID(2)	Additional Image Disk 1	Wide SCSI (68 pin)
ID(3)	Additional Image Disk 2	Wide SCSI (68 pin)
ID(4)	Additional Image Disk 3	Wide SCSI (68 pin)
ES	EasyStore (DOR)	Narrow SCSI (50 pin)
CD-Rec	EasyStore (Cd-Rec)	Narrow SCSI (50 pin)
70cm h n	**h**: 68p UHD (Ultra High Density **n**: 68p FW (Fast Wide)	

7.1.1. ULTRASPARC 5/10 PTI 2 CONFIGURATIONS

Desktop:



Configuration 1

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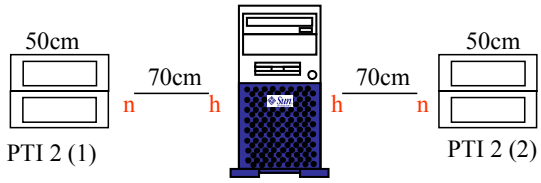
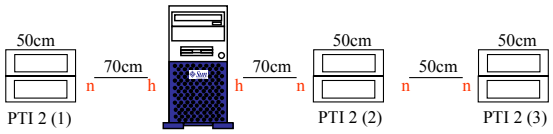


	PTI 2 (1)		PTI 2 (2)	
ES	ID(1)	ID(2)	ID(3)	ID(4)
			X	
X				X
X			X	X
	X			
		X		
	X	X		

Configuration 2

NOTE

In case of 4 image disks, you may use 1 SCSI chain (See right hand side of configuration 3)



PTI 2 (1)	PTI 2 (2)		PTI 2 (3)	
ES	ID(1)	ID(2)	ID(3)	ID(4)
	X	X	X	
X	X	X		X
X	X	X	X	X

Configuration 3

NOTE

If not initial installation, a 150 cm cable must be ordered

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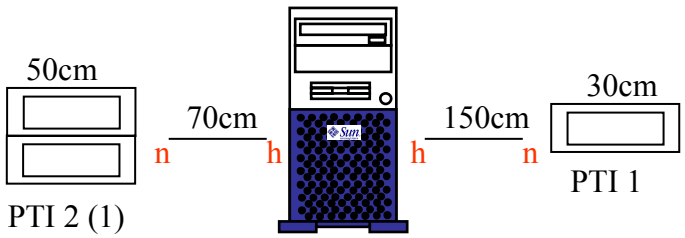
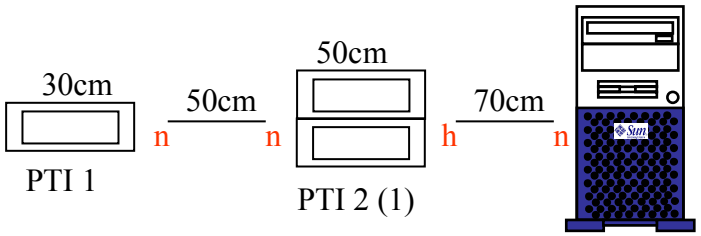
7.1.2. ULTRASPARC 5/10 PTI 2 + PTI 1 CONFIGURATIONS

Desktop:

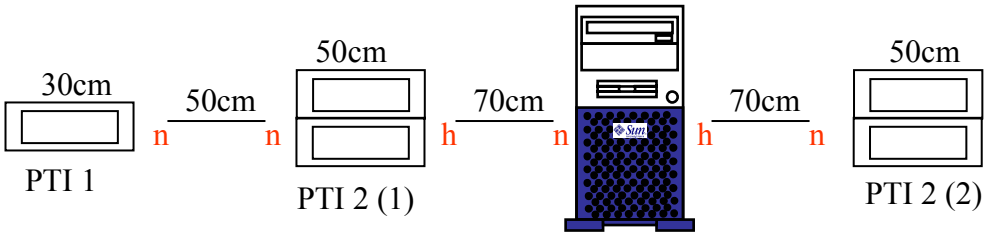
Configuration 1
+
CD-Rec



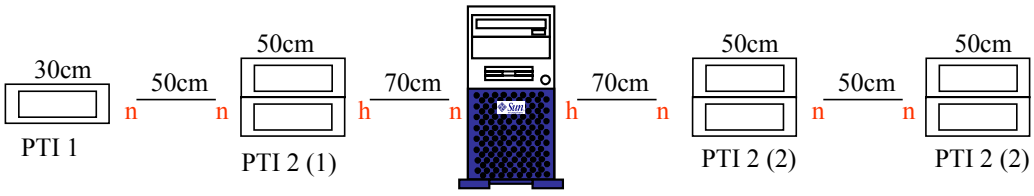
Configuration 1
+
CD-Rec



Configuration 2
+
CD-Rec



Configuration 3
+
CD-Rec



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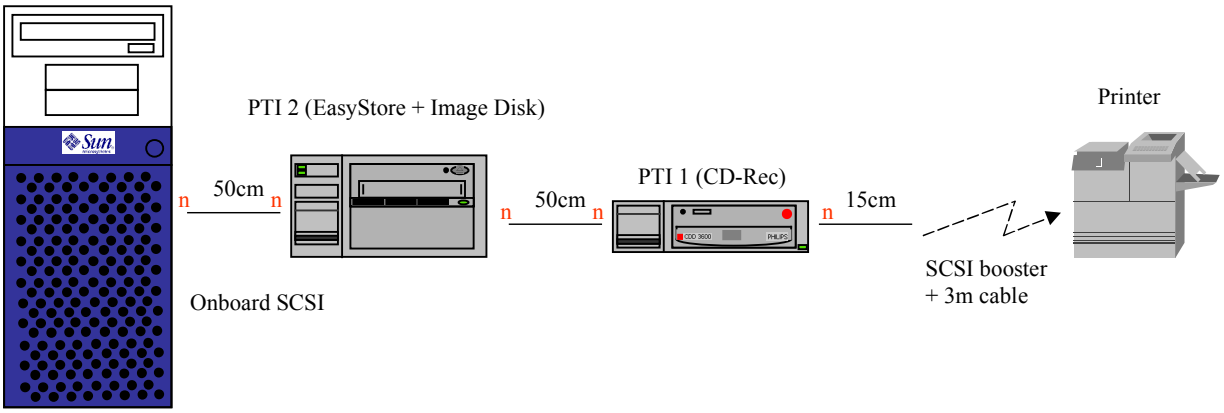
7.2. ULTRASPARC 60 PTI 2 + PTI 1 CONFIGURATION (DESKTOP)

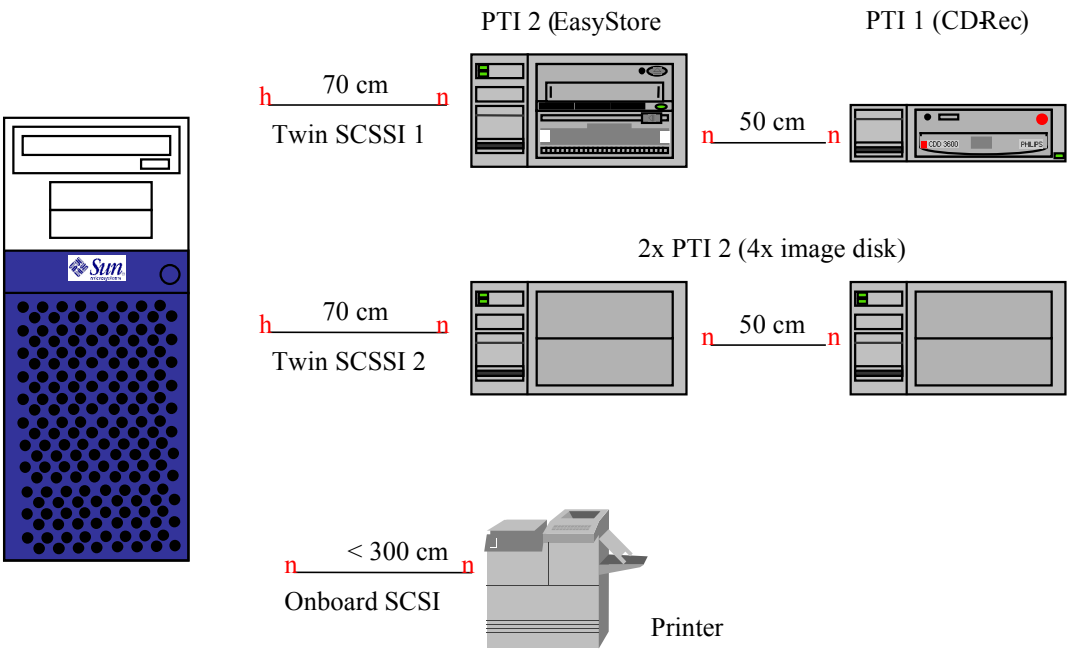
7.2.1. ONBOARD SCSI ONLY

In case of 3 devices (or less), only the onboard SCSI card is available. The next figure shows the configuration.



7.2.2. ONBOARD SCSI AND TWIN SCSI CARD

In case of more than 3 device, a Twin SCSI card is needed. The next figure shows the configuration.



NOTE

*If you have already 3 devices and you order an option, you **will** need the Twin SCSI card.*

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8. CONNECTING A PRINTER

NOTE

See Z drawings for connection possibilities

8.1. LASER PRINTER

In the **Imager Compatibility Service Manual** you will find a compatibility list of the Hardcopy Units supported by the EasyVision.

Non-Philips Laser Hardcopy Units are to be installed by the supplier.

In the Service Manual Imager Compatibility you will find the settings for the various Laser Hardcopy Units, when connected to EasyVision.
Usually the HCU service engineer will configure the HCU and will have the information necessary to do this. In some cases however he may not be aware of special settings when connecting to EasyVision.

8.2. SCSI PRINTER

WARNING

The maximum length of a SCSI chain, including the printer SCSI cable, is 3 meters !!!

See Z drawings

To connect an SCSI Printer, remove the SCSI terminator from the peripheral enclosure.
Connect the printer SCSI-cable and SCSI adapter narrow/narrow between the SCSI connector of the peripheral enclosure and the printer itself or if relevant to a SCSI booster.
Put the SCSI terminator on the second SCSI connector of the printer or in case of a SCSI booster the termination is done by the SCSI extender (so no external terminator required).
For detailed installation information of SCSI printers please refer to the installation manual delivered with the printer.

8.3. NETWORK PRINTER

The network printer is connected to the network.

8.4. PARALLEL PRINTER

A Postscript printer can be connected to the parallel port (max. length - 3m)

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9. ADDING PERIPHERALS TO PERIPHERAL ENCLOSURE

When adding a peripheral (SCSI device) to the peripheral enclosure:

- Switch off the power and disconnect the power cable and the SCSI cable.
- Open the top cover of the peripheral enclosure by removing screws.
- Remove plastic front cover in case of inter-active peripherals, e.g. Optical Disk, by removing screws on the inside.
- For inter-active peripherals like Optical disks you have to push out a metal part from the front of the enclosure. When adding an extra image disk this is not necessary!
- Check jumper settings!, see section Programmings
- Mount the SCSI device in the metal bracket inside the peripheral enclosure.
- Connect power and SCSI cable to new SCSI device.
- Replace the top cover and connect the cables again.

See Section Replacements for Additional Image disk.

10. CONNECTIVITY

10.1. PRINTERS

See Service Manual Imager Compatibility EasyVision Release 4.

10.2. PERSONAL COMPUTERS

Personal computers (Windows ‘95/’97, Windows NT) are able to view the image database by means of the Netview option (Software License needed).
Connect the PC with a network card to the network (must be the same network as the EasyVision), set IP address and make a **direct** connection.
On the **URL** bar type: server network address, semi-colon, port number 5000 (e.g. 192.168.130.1: 5000)
The next step is to login with a User Name and a Password (configured in the customize panel of the EasyVision)

10.2.1. JPEG, TIFF

Images (JPEG, TIFF) and movies (MPEG) can be saved within the EasyVision application. These files can be put on CD-ROM for viewing on a Personal Computer. You need a PC application (Web browser) to view those JPEG, TIFF images or to watch an MPEG movie.

10.3. DICOM

The EasyVision DICOM configuration is described in the Release Bulletin.
There is also a Service Manual available “How to read a DICOM Conformance Statement”, which is delivered with the EasyVision Release 4.x system.

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